

## **SECTION 07903 JOINT SEALERS**

### **PART 1 - GENERAL**

#### **1.01 SUMMARY**

**A. Section Includes:**

1. Prepare sealant substrate surfaces.
2. Provide silicone sealant. [GE, SilGlaze® SCS2800 Series or SilPruf® NB SCS9000 Series]
3. Provide accessories as necessary for a complete working installation.
  - a. Including but not limited to backup material, joint filler, setting blocks, spacer shims and tapes.

**B. Related Sections:** Drawings and general provisions of the Contract, including General and Supplementary Conditions, Special Conditions and other Division 1 Specification sections, apply to Work of this section.

1. Section 04850 - Stone: Sealants used in conjunction with stone.
2. Section 07210 - Building Insulation
3. Section 07240 - Exterior Insulation Finish System
4. Section 07410 - Metal Wall Panels: System sealant and mastic.
5. Section 07620 - Flashing and Sheet Metal: Sealants used in conjunction with metal flashings.
6. Section 08800 - Glazing: Sealants used in conjunction with glazing methods.

**C. Locations:**

1. Interior and exterior vertical and horizontal joints to maintain weather tight conditions and sound building practices.
  - a. Use for perimeter weatherseal for field glazing, window installation, and general purpose sealing applications.
  - b. For use with general purpose sealing applications on vinyl, stone (including granite), aluminum, metals, glass, wood and plastics.
  - c. Do NOT use for structural glazing applications, continuous water immersion applications or in applications where sealant is to be painted.
  - d. Verify proper use and application with manufacturer.

#### **1.02 REFERENCES**

**A. American Society for Testing and Materials (ASTM):**

1. AAMA 802.3
2. AAMA 805.2
3. AAMA 808.3 (Type 1)
4. ASTM C717 - Standard Terminology of Building Seals & Sealants
5. ASTM C793 – Standard Test Method for Effects of Accelerated Weathering on Elastomeric Joint Sealants
6. ASTM C920 - Specification for Elastomeric Joint Sealants: Type S, Grade NS, Class 50, Use M, A, G, O-

7. ASTM D412 – Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers - Tension
8. ASTM D2240 – Standard Test Method for Rubber Property - Durometer Hardness
9. ASTM C1193 – Standard Guide for use of Joint Sealants
10. Federal Hazardous Substances Act: Non-toxic.

### 1.03 SYSTEM DESIGN

#### A. Properties:

Tensile Strength	220 PSI per ASTM D412
Elongation	480% Minimum per ASTM D412
Dynamic Movement	+50% per ASTM C719
Hardness	25 per ASTM D2240
Staining	Non-Staining to stone per ASTM C1248

### 1.04 SUBMITTALS

#### A. Section 01300 - Submittals: Procedures for submittals.

1. Product Data: Provide product chemical characteristics, performance criteria, substrate preparation, limitations, color availability and MSDS sheets.
2. Samples: Provide Color samples for selection by Architect.

### 1.05 QUALITY ASSURANCE

- A. Installer Qualifications: Company specializing in performing Work of this Section with minimum five (5) years of continuous satisfactory and documented experience.
- B. Compatibility: Verify materials used are compatible with each other and appropriate for the intended use per the product manufacturer.
- C. Mock-up: At the Architect's request, provide six (6) inch long samples of sealant types selected in location(s) chosen by the Architect. Remove when selection is complete.

### 1.06 DELIVERY, STORAGE AND HANDLING

- A. Section 01600 - Product Requirements: Transport, handle, store, and protect products.
- B. Deliver Products in manufacturer's original unopened containers or packages with labels intact, identifying product and manufacturer, date of manufacture, lot number, shelf life, curing time, and mixing instructions, where applicable.
- C. Store and handle materials to prevent deterioration or damage due to moisture, temperature changes, contaminants, or other causes.
  1. Store below 27°C (80°F) in a dry area.

### 1.07 PROJECT CONDITIONS OR SITE CONDITIONS

- A. Environmental Requirements: Install sealant during manufacturers recommended temperature ranges and weather conditions for application and cure. Consult manufacturer when sealant cannot be applied during recommended conditions.

### 1.08 WARRANTY

- A. Provide Manufacturer's Three (3) Year Material Warranty: Replace defective material.
- B. Provide Installer's One (1) Year Workmanship Warranty

## 1.09 ENVIRONMENTAL REQUIREMENTS

### A. Indoor Air Quality:

1. Low VOC and nontoxic sealants required as approved by the United States Toxic Substance Control Act (TSCA) and United States Department of Agriculture (USDA) for use in federally inspected meat and poultry plants.
2. Silicone sealant can contain methylpolysiloxanes which can generate formaldehyde at approximately 300 degrees Fahrenheit (150°C) and above, in atmospheres which contain oxygen. Formaldehyde is a skin and respiratory sensitizer, eye and throat irritant, acute toxicant, and potential cancer hazard. Flash Point is approx. 110°C (230° F.)

### B. Disposal of sealant and sealant containers to be made in accordance with federal, state and local regulations.

## PART 2 - PRODUCTS

### 2.01 BUILDING SEALANTS *(See Sealant Schedule at the end of this Section for specific use.)*

#### A. One-Part Silicones: ASTM C920, Type S, Grade NS, Class 50.

1. Products: One part, neutral cure, medium modulus non-staining silicone sealant;
  - a. SilGlaze® SCS2800 Series (10 minute tack time) or SilPruf® NB SCS9000 Series (20 to 30 minute tack time), General Electric.
  - b. Dow Corning 756-HP
  - c. Approved substitutions per Section 01300.

#### B. Cylindrical Flexible Foam Backer Rod:

1. SOF® ROD bi-cellular hybrid type backer rod by Nomaco.
2. Approved substitutions per Section 01300.

### 2.02 COLORS

#### A. As selected by Architect. *(White, Black, Limestone, Light Grey, Aluminum (Medium) Grey, Dark Grey, Precast White)*

### 2.03 ACCESSORIES

- A. Joint Cleaner: Provide type of joint cleaning compound recommended by sealant manufacturer for joint surfaces to be cleaned.
- B. Primer: As recommended by sealant manufacturer.
- C. Masking tape and similar accessories to protect surfaces from damage.

## PART 3 - EXECUTION

### 3.01 EXAMINATION

#### A. Section 01700 - Execution Requirements

#### B. Verification of Conditions: Verify that field measurements, surfaces, substrates and conditions are as required, and ready to receive Work.

1. Verify that joint widths are in conformance with sealant manufacturer allowable limits.
2. Verify that contaminants capable of interfering with adhesion have been cleaned from joint and joint properly prepared.

- C. Report in writing to the Architect prevailing conditions that will adversely affect satisfactory execution of the Work of this Section. Do not proceed with Work until unsatisfactory conditions have been corrected.
- D. By beginning Work, Contractor accepts conditions and assumes responsibility for correcting unsuitable conditions encountered at no additional cost to the Owner.

### 3.02 PREPARATION

- A. Prepare and size joints in accordance with manufacturer's instructions. Clean substrates of dirt, laitance, dust, or mortar using solvent, abrasion, or sandblasting as recommended by manufacturer. Remove loose materials and foreign matter which might impair adhesion of sealant.
- B. Verify that joint backing and release tapes are compatible with sealant. Verify sealant is suitable for substrate. Verify that sealant is paintable if painted finish is indicated.
- C. Protect materials surrounding work of this Section from damage or disfiguration.

### 3.03 INSTALLATION

- A. General:
  - 1. Install sealant in accordance with manufacturer's published instructions. Perform work in accordance with ASTM C1193.
  - 2. Prime or seal joint surfaces where recommended by sealant manufacturer. Do not allow primer or sealer to spill or migrate onto adjoining surfaces.
  - 3. Install backer rod and bond breaker tape where required by manufacturer.
  - 4. Install preformed compressible and non-compressible fillers in accordance with manufacturer's published instructions.
  - 5. Install sealants to depths recommended by sealant manufacturer in uniform, continuous ribbons free of air pockets, foreign embedded matter, ridges, and sags, "wetting" joint bond surfaces equally on both sides.
  - 6. Tool joints concave unless shown otherwise. Where horizontal joints are between a horizontal surface and a vertical surface, fill joint to form slight cove so that joint will not trap moisture and foreign matter. Dry tool joints. Do not use soap, water, or solvent to tool joints.
  - 7. Caulk cracks around perimeter of window casings (4 sides) and doors (sides, tops and thresholds) where cracks are too small for foam.

### 3.04 CURING

- A. Cure sealants in compliance with manufacturer's published instructions.

### 3.05 CLEANING

- A. Remove excess and spillage of sealants promptly as the work progresses, using materials and methods as recommended by sealant and substrate manufacturers. Clean adjoining surfaces to eliminate evidence of spillage without damage to adjoining surfaces or finishes.

### 3.06 SCHEDULE [Modify as needed.]

- A. Exterior granite to other substrate joints.
- B. Exterior air-conditioner perimeter seal to painted metal panel.

END OF SECTION